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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,059	11/07/2007	Gunter Klein	PAT-01147	1969

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BASF CORPORATION
Patent Department
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EXAMINER	
NGUYEN, VU ANH	
ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
10/30/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/595,059	KLEIN ET AL.	
	Examiner	Art Unit	
	Vu Nguyen	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21 and 24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/24/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-17, 19-21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neppl et al. (WO 02/44237) in view of Hoffmann et al. (US 5,326,820) with additional evidential support from PFOA-FACTS.COM. ***Notes: US Pat. No. 6,939,601 is being relied upon as an English equivalence of WO 02/44237.***

4. Regarding the limitations set forth in these claims, Neppl et al. (Neppl, hereafter) teaches a clear coat material comprising an immediate-coat composition and a top-coat composition, wherein the immediate-coat composition comprises a cycloaliphatic polyester having an OH number of 20-150, an acid number less than 10, a T_g of 0-70°C, an M_w of 750-7000, and a cycloaliphatic content of about 49 wt% (col. 9, lines 22-30;

col. 12, lines 21-41), and wherein the top-coat composition comprises (i) 10-70 wt% of a nonaqueous solution of a polyacrylate having an OH number of 100-250, an M_n (inherently within the range of) 500-10,000, (ii) 10-70 wt% of a nonaqueous solution of a fluorinated polymer, and (iii) 20-60 wt% of at least one blocked aliphatic or cycloaliphatic polyisocyanate (col. 4, lines 3-18; col. 7, lines 51-60). In a preferred embodiment, the top-coat composition comprises about 24% of an acrylic copolymer, about 10% of a fluoropolymer, about 16% of Desmodur BL 3175, and about 19% Vestanat B 1370 (col. 12, lines 63-67; col. 13, lines 1-4). It is noted that Desmodur® BL 3175 is a butanone oxime-blocked polyisocyanate based on hexamethylene diisocyanate and Vestanat® B 1370 is an oxime-blocked isophorone-based polyisocyanate (See attached data sheets). The disclosed acrylic copolymer, since it is a hydroxyl-containing acrylic-based copolymer, is expected to have a T_g in the claimed range of -15 to 60°C. The clearcoat composition further comprises additives (col. 13, lines 4-10), and said clearcoat is an automotive clearcoat (col. 1, lines 3-5). The prior art also teaches a process of coating using the disclosed clearcoat material and curing at 249°C (col. 13, lines 47-60).

5. Clearly, the prior-art disclosure would anticipate the claimed invention if the fluoropolymer was replaced with the polyester.

6. Hoffmann et al. (Hoffmann, hereafter) teaches a clearcoat composition to be used in automotive refinishing (col. 1, lines 19-22), said composition comprising a hydroxyl-containing component (A), at least one polyisocyanate, organic solvents, and additives (col. 1, lines 10-18). The component A comprises 5-80 wt% of a cycloaliphatic polyester having an OH number of 50-180, an acid number of 5-20, an M_n of 1,500-

6,000, and the cycloaliphatic content is 5-100 mol% (col. 2, lines 30-40; col. 3, lines 28-33; col. 5, lines 64-68), and 95-20 wt% of a polyacrylate having an OH number of 30-250 and an acid number of 0-50 (col. 2, lines 35-40). The polyisocyanate comprises hexamethylene diisocyanate and isophorone diisocyanate (col. 4, lines 23-25).

[Motivations] The disclosed clearcoat, due to the combined use of the cycloaliphatic polyester and the polyacrylate, is said to be superior to conventional clearcoats because it has improved drying capacity and better processibility (col. 1, line 37) as well as good stability of gloss, crack resistance, filling power, and good flow properties (col. 2, lines 1-15).

7. It is also well know in the art, as evidenced from the information on PFOA-FACTS.COM, that the use of fluoropolymer in industry such as automotive coating is subject to tight regulation due to its potential negative impact on the environment and health. Not only that, fluoropolymer, being very hydrophobic, poses a problem of insufficient surface wetting. Further, fluoropolymers are well known for being hard-to-process.

8. It is also noted that the double-layer-clearcoat design taught in Neppl is based on the idea that the polyester is used to adhere to a substrate and helps the adhesion of the fluoropolymer-containing topcoat to the polyester layer (col. 3, lines 31-42). Further, the polyester provides flexibility while the topcoat provides hardness (Abstract, col. 4, lines 34-39).

9. From the teachings of Hoffmann, the pollution issues of fluoropolymers, and the teachings of Neppl, it would have been obvious to a person having ordinary skill in the

art at the time the invention was made to have modified the clearcoat material taught by Neppl by replacing the fluoropolymer with the polyester so as to obtain a clearcoat composition that can be conveniently applied to a substrate in one step, wherein the modified clearcoat material is more environmentally friendly, safer, more processible, and has good flow properties, and the resulting coatings possess both flexibility and hardness.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neppl et al. (WO 02/44237) in view of Hoffmann et al. (US 5,326,820), and O'Connor et al. (US 5,521,272).

11. Regarding the limitations set forth in this claim, the coating material of claim 1 has been shown to be unpatentable over Neppl in view of Hoffmann as discussed above. However, Neppl fails to specifically teach polyisocyanate that is blocked with substituted pyrazoles.

12. O'Connor et al. (O'Connor, hereafter) teaches polyisocyanates that are blocked with substituted pyrazoles for use in clearcoats that are employed in automotive applications (col. 1, lines 15-18; col. 4, lines 9-32, Claim 1). Said blocked polyisocyanate is to be used with hydroxyl-containing polyacrylate and/or polyester (col. 3, lines 15-20). The polyisocyanates include hexamethylene diisocyanate and isophorone diisocyanate (Claim 1). **[Motivations]** The prior art teaches that conventional automotive clearcoats that use conventional blocked polyisocyanates as crosslinking agents and either elevated or reduced unblocking temperature suffer from

yellowing problem whereas the disclosed blocked polyisocyanates can be cured at low temperature and do not have the yellow discoloration problem (col. 1, lines 15-67; col. 2, lines 1-10; col. 3, lines 1-8).

13. In light of such benefits, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have employed the blocked polyisocyanates taught by O'Connor in the clearcoat material obtained from the aforementioned modification of the clearcoat taught by Neppl in view of Hoffmann so that the unblocking temperature can be lowered and the resulting coatings are free of the yellow discoloration problem.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Nguyen whose telephone number is (571)270-5454. The examiner can normally be reached on M-F 7:30-5:00 (Alternating Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vu Nguyen
Examiner
Art Unit 1796

/David Wu/
Supervisory Patent Examiner, Art Unit 1796